WHAT IS CLAIMED IS:

1. A screen for image display apparatus comprising:

a base member;

a light absorption layer formed on the base member and adapted for absorbing light of a wavelength range covering substantially an entire visible light range; and

a light control layer formed on the light absorption layer;

the light control layer having a diffuse image forming function of causing diffuse reflection of image display light projected via projection image forming means and thus forming an image, and a reflection wavelength selection function of selectively reflecting light of the wavelength range of the image display light and transmitting light of the other wavelength ranges.

2. The screen for image display apparatus as claimed in claim 1, wherein the light control layer has fine convexes and concaves or a micro-mirror formed in its surface part.

3. The screen for image display apparatus as claimed in claim 1, wherein the light control layer has the diffuse image forming function by having a fine diffuser of a different refractive index dispersed in the layer.

4. The screen for image display apparatus as claimed in claim 1, wherein the light control layer has the reflection wavelength selection function by being formed as a multilayer thin film band-pass filter using a Bragg reflection film.

5. The screen for image display apparatus as claimed in claim 1, wherein the light

control layer has the reflection wavelength selection function by having a holographic reflection film, and is formed as a reflective holographic screen.

6. The screen for image display apparatus as claimed in claim 1, wherein the light control layer has the reflection wavelength selection function by having its surface part coated with a mixture of first toner particles having a higher reflectance for light of a red wavelength range than for light of the other wavelength ranges, second toner particles having a higher reflectance for light of a green wavelength range than for light of the other wavelength ranges, and third toner particles having a higher reflectance for light of a blue wavelength range than for light of the other wavelength ranges.

7. The screen for image display apparatus as claimed in claim 1, wherein the light control layer has a gain control function of varying the quantity of reflected light with respect to incident light, depending on an exit direction of the reflected light.

8. The screen for image display apparatus as claimed in claim 7, wherein the light control layer has a lens effect by having plural fine concave parts in its surface part, thereby having the gain control function.

9. The screen for image display apparatus as claimed in claim 7, wherein the base member has plural fine concave parts in its surface part, and the light control layer has a shape following the shape of the surface of the base member and has a lens effect, thereby having the gain control function.

10. The screen for image display apparatus as claimed in claim 1, further

comprising an external light reduction layer on the light control layer, the external light reduction layer being adapted for transmitting light of a wavelength range of image display light projected via the projection image forming means and for absorbing light of other wavelength ranges.

11. The screen for image display apparatus as claimed in claim 1, further comprising an external light reduction layer on the light control layer, the external light reduction layer having plural fine shade plates for transmitting light in a direction of incidence of image display light projected via the projection image forming means and for intercepting incident light in other directions.

12. The screen for image display apparatus as claimed in claim 1, further comprising an external light reduction layer on the light control layer, the external light reduction layer being adapted for transmitting light in a state of polarization of image display light projected via the projection image forming means and for absorbing light in other states of polarization.

13. A method for manufacturing a screen for image display apparatus, the method comprising forming a reflective holographic screen using light beams of primary colors that decide a color reproducing wavelength in an image projector, as object light and reference light, thus providing a reflection wavelength characteristic corresponding to the color reproducing wavelength of the image projector.

14. A method for manufacturing a screen for image display apparatus, the method comprising applying a material prepared by mixing plural types of toner particles onto

a projection surface, thus providing a reflection wavelength characteristic corresponding to a color reproducing wavelength of an image projector.

15. An image display apparatus comprising:

a light source for emitting primary-color light of red, green and blue;

a spatial light modulator for modulating the intensity of the light beam emitted from the light source in accordance with image information;

projection image forming means for causing image formation on a screen, of the primary-color light with its intensity modulated by the spatial light modulator; and

peripheral light generating means for illuminating the screen with peripheral light having a wavelength different from the wavelength of the primary-color light;

wherein the screen has a higher reflectance for the primary-color light than for the peripheral light and a lower absorptivity for the primary-color light than for the peripheral light.

16. The image display apparatus as claimed in claim 15, wherein the light source is a laser light source,

the apparatus has scanning means for scanning a direction of irradiation of a laser beam emitted from the laser light source over an image display range, and

the spatial light modulator is light intensity control means for changing light intensity of the laser beam, corresponding to timing of scanning in the direction of irradiation of the laser beam by the scanning means.

17. The image display apparatus as claimed in claim 15, wherein the light source

is a laser light source,

the apparatus has scanning means for scanning a direction of irradiation of a laser beam emitted from the laser light source over an image display range, and

the spatial light modulator is a switching element for changing light intensity on the screen, of the laser beam with the direction of irradiation scanned by the scanning means.

18. The image display apparatus as claimed in claim 17, wherein the switching element is a liquid crystal modulator.

19. The image display apparatus as claimed in claim 17, wherein the switching element is a micro-mirror array.

20. The image display apparatus as claimed in claim 15, wherein the light source has a discharge tube and filtering means for intercepting a light beam of a partial wavelength range of light beams emitted from the discharge tube, and

the spatial light modulator is a switching element for changing light intensity on the screen, of the light beam passed through the filtering means.

21. The image display apparatus as claimed in claim 20, wherein the switching element is a liquid crystal modulator.

22. The image display apparatus as claimed in claim 20, wherein the switching element is a micro-mirror array.

23. The image display apparatus as claimed in claim 15, wherein the light source has a discharge tube, filtering means for intercepting a light beam of a partial

wavelength range of light beams emitted from the discharge tube, and a laser oscillator for emitting a red laser beam, and

the spatial light modulator is a switching element for changing light intensity on the screen, of the light beam passed through the filtering means and the red laser beam.

24. The image display apparatus as claimed in claim 23, wherein the switching element is a liquid crystal modulator.

25. The image display apparatus as claimed in claim 23, wherein the switching element is a micro-mirror array.

26. The image display apparatus as claimed in claim 23, wherein the discharge tube is a metal halide lamp, a high-pressure mercury lamp, or a xenon lamp.

27. The image display apparatus as claimed in claim 15, wherein the screen is a reflective holographic screen having a reflection wavelength characteristic corresponding to a color reproducing wavelength in the light source, the spatial light modulator and the projection image forming means.

28. The image display apparatus as claimed in claim 15, wherein the screen has its projection surface coated with a material prepared by mixing plural types of toner particles, thereby having a reflection wavelength characteristic corresponding to a color reproducing wavelength in the light source, the spatial light modulator and the projection image forming means.

29. The image display apparatus as claimed in claim 15, wherein the screen

comprises a base member, a light absorption layer formed on the base member and adapted for absorbing light of a wavelength range covering substantially an entire visible light range, and a light control layer formed on the light absorption layer, and

the light control layer has a diffuse image forming function of causing diffuse reflection of primary-color light projected via the projection image forming means and thus forming an image, and a reflection wavelength selection function of selectively reflecting light of the wavelength range of the primary-color light and transmitting light of the other wavelength ranges.

30. The image display apparatus as claimed in claim 29, wherein the light control layer has fine convexes and concaves or a micro-mirror formed in its surface part.

31. The image display apparatus as claimed in claim 29, wherein the light control layer has the diffuse image forming function by having a fine diffuser of a different refractive index dispersed in the layer.

32. The image display apparatus as claimed in claim 29, wherein the light control layer has the reflection wavelength selection function by being formed as a multilayer thin film band-pass filter using a Bragg reflection film.

33. The image display apparatus as claimed in claim 29, wherein the light control layer has the reflection wavelength selection function by having a holographic reflection film, and is formed as a reflective holographic screen.

34. The image display apparatus as claimed in claim 29, wherein the light control layer has the reflection wavelength selection function by having its surface part

coated with a mixture of first toner particles having a higher reflectance for light of a red wavelength range than for light of the other wavelength ranges, second toner particles having a higher reflectance for light of a green wavelength range than for light of the other wavelength ranges, and third toner particles having a higher reflectance for light of a blue wavelength range than for light of the other wavelength ranges.

35. The image display apparatus as claimed in claim 29, wherein the light control layer has a gain control function of varying the quantity of reflected light with respect to incident light, depending on an exit direction of the reflected light.

36. The image display apparatus as claimed in claim 35, wherein the light control layer has a lens effect by having plural fine concave parts in its surface part, thereby having the gain control function.

37. The image display apparatus as claimed in claim 35, wherein the base member has plural fine concave parts in its surface part, and the light control layer has a shape following the shape of the surface of the base member and has a lens effect, thereby having the gain control function.

38. The image display apparatus as claimed in claim 29, further comprising an external light reduction layer on the light control layer, the external light reduction layer being adapted for transmitting light of a wavelength range of image display light projected via the projection image forming means and for absorbing light of other wavelength ranges.

39. The image display apparatus as claimed in claim 29, further comprising an external light reduction layer on the light control layer, the external light reduction layer having plural fine shade plates for transmitting light in a direction of incidence of image display light projected via the projection image forming means and for intercepting incident light in other directions.

40. The image display apparatus as claimed in claim 29, further comprising an external light reduction layer on the light control layer, the external light reduction layer being adapted for transmitting light in a state of polarization of image display light projected via the projection image forming means and for absorbing light in other states of polarization.

41. The image display apparatus as claimed in claim 15, wherein the peripheral light generating means has a fluorescent tube having a wavelength characteristic that is different from a color reproducing wavelength in the light source, the spatial light modulator and the projection image forming means, and causes the fluorescent tube to emit the peripheral light.

42. The image display apparatus as claimed in claim 15, wherein the peripheral light generating means has a fluorescent tube and filtering means for intercepting a light beam of a partial wavelength range of light beams emitted from the fluorescent tube, and emits peripheral light having a wavelength characteristic that is different from a color reproducing wavelength in the light source, the spatial light modulator and the projection image forming means, via the filtering means.

43. The image display apparatus as claimed in claim 15, wherein the peripheral light generating means comprises a light-emitting diode and emits peripheral light having a wavelength characteristic that is different from a color reproducing wavelength in the light source, the spatial light modulator and the projection image forming means.

44. The image display apparatus as claimed in claim 15, wherein the peripheral light generating means comprises an ultraviolet light-emitting diode and a visible phosphor excited by an ultraviolet ray emitted by the ultraviolet light-emitting diode, and emits peripheral light having a wavelength characteristic that is different from a color reproducing wavelength in the light source, the spatial light modulator and the projection image forming means.

45. An image display apparatus comprising:

a light source for emitting light of two colors of primary colors of red, green and blue, and an ultraviolet ray;

a spatial light modulator for modulating the intensity of the light beam emitted from the light source in accordance with image information;

projection image forming means for causing image formation on a screen, of the two-color light and the ultraviolet ray with their intensities modulated by the spatial light modulator; and

peripheral light generating means for illuminating the screen with peripheral light having a wavelength different from the wavelengths of the two-color light and

the ultraviolet ray;

wherein the screen has a higher reflectance for the two-color light than for the peripheral light and a lower absorptivity for the two-color light than for the peripheral light, and the screen has a color conversion layer for converting the ultraviolet ray to light of the remaining one color of the primary colors.